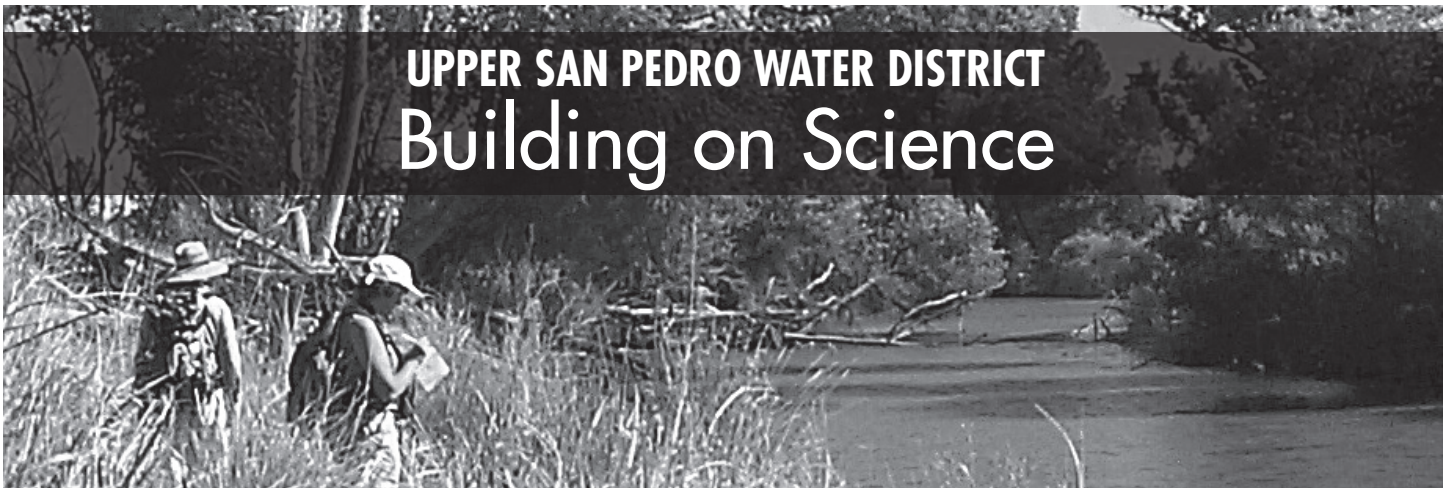

UPPER SAN PEDRO WATER DISTRICT
Building on Science

Water is a very limited resource in Arizona, and the San Pedro River is one of the last rivers in the state that continually flows in many stretches all year long. While balancing the needs of both nature and people can be difficult, we know more about ways to do this today than we ever have before.

More pumped out than nature can replenish

Currently more water is taken from the underground aquifer in the Sierra Vista Subwatershed each year than nature can recharge or replenish with rainwater and snow melt, resulting in a water deficit or overdraft. Overdrafting groundwater reduces the amount of water that is available for residents and the San Pedro River, and the lush habitats it supports for wildlife. As our municipal and domestic water demands increase over time, balancing human and natural water needs becomes increasingly important.

Species habitat and vegetation would be lost

Scientific studies have shown that if the groundwater levels within the Subwatershed continue to decline, the flow of the San Pedro River will be disrupted and vegetation near the river will be lost. The result from the loss of vegetation would be severe erosion and loss of habitat for hundreds of species of plants, fish and wildlife, including effects on endangered species.

Diverse nature area

According to The U.S. Bureau of Land Management, "more than 80 species of mammals, 40 species of reptiles and amphibians, 100 species of butterflies, 20 species of bats, and 350 species of birds live or migrate along the San Pedro riverbanks."

In Arizona, most of the once common streamside habitats along our rivers have dried up due to over-pumping of groundwater or the diversion of water for agricultural or urban uses. However, much of the San Pedro River still continues to flow in the U.S. and Mexico today.

Current science and our understanding of water issues

Many state and federal agencies, universities and scientific institutions have studied the San Pedro River and surrounding areas over the past few decades. Complex computer models are able to predict how the river and groundwater will change according to how we manage water. Where water is pumped or recharged can be as important to river flows over the next decade as how much we pump. We also know how much water is required to keep the river system healthy, and we can estimate our total human water uses within the region, and how they

are changing over time. Improved monitoring systems tell us how much water is in the river, how climate varies from year to year, and what the benefits are from the water management projects that have already been implemented.

How wet is the San Pedro River now? What are we specifically trying to protect?

A recent study by the U.S. Geological Survey concluded that at least 43 percent of the San Pedro Riparian National Conservation Area within the Sierra Vista Subwatershed had water all year long with stable groundwater levels near the ground surface throughout the floodplain. The remaining reaches of the Conservation Area within the Sierra Vista Subwatershed had water in the river at least 50 percent of the time, with groundwater only slightly deeper. Projects supported by a future District would be designed to maintain those streamflow and groundwater conditions, protecting streamside habitats as a result.

Question:

- What additional information do you think is important for decision-making that the District could explore?